Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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Letter to the Editor

Challenging cognitive biases in the health system during the COVID-19 pandemic

'Among Chuan-tzu's many skills, he was an expert draftsman.

The king asked him to draw a crab. Chuang-tzu replied that he needed five years, a country house, and twelve servants.

Five years later the drawing was still not begun.

'I need another five years,' said Chuang-tzu.

The king granted them.

At the end of these ten years, Chuang-tzu took up his brush and, in an instant, with a single stroke,

he drew a crab, the most perfect crab ever seen'.[1]

The Nobel Prize winner Daniel Kahneman's book, 'Thinking, Fast and Slow,'[2] divides the mind into two modes of thinking, by which we make decisions. 'System 1' makes automatic, intuitive, emotional decisions. 'System 2' monitors the output of system 1 and sometimes overrides it when the result conflicts with logic, probability, or other decision-making rules.

Kahneman argues that for some decisions, system 1 can be suitable, but for others, particularly those including health consequences, system 2 is critical.

During the COVID-19 pandemic, politicians, journalists, and also some health workers have been using war metaphors to identify: an enemy (the virus), a strategy ('flatten the curve'), the frontline warriors, even heroes (healthcare personnel), the home front (citizens in lockdown), and the traitors and deserters (people denying the existence of the virus and breaking the social distancing rules). The war approach seems to justify the broad and uncontrolled use of system 1, but it is now clear that the wartime imagery is used to gloss over the lack of preparedness in public health capabilities. Militarized narratives only serve to distract from an appropriate understanding of the problem and from the right actions needed to assist the public health system.

In the short tale of Chuang-tzu, his quickness is the fruit of a longtime training, culminating in preparedness in times of strife.

In a famous passage from the Republic,[3] Plato compares the polis with a ship in the storm, where a crowd of shady figures compete for the ship's wheel by professing to have sailor skills that none of them possess.

This is a metaphor suggested by the seafaring meaning of the verb 'to govern:' in fact, this word comes from the Latin word 'gubernare' and originally from the Greek word 'κυβερνάω'—hold the rudder.

In the case of COVID-19, it appears that few leaders in the Western world are holding the rudder, and unfortunately, very often, the quickness we observe in the decision-making of our health managers appears to be the fruit of an impulse stemming from lack of preparedness.

In March 2020, Lombardy became the scene of a catastrophic outbreak. A recent study shows that significant privatization of Italy's decentralized healthcare system was a key factor in one of the world's highest per capita death tolls. The cuts were of 45 million US$ between 2010 and 2019.[4] As a consequence of privatization, there was an increased investment in profit-making medical facilities, which took precedence over the training of specialists.[5]

Thus, this is how our health system was mistreated before the pandemic. Moreover, during this second wave of COVID-19, and while the tragic consequences of the first outbreak are still evident, healthcare strategy consultants continue to apply mental shortcuts or other decision-making strategies that are not in the best interest of patients and of health workers. This is mainly a consequence of a tendency to oversimplify decisions that are based not on present circumstances, but on the past experience.

A prescient example of this is the variability of strategies among different regions for a dedicated pathway for patients, including screening of healthcare workers.[6]

Moreover, the COVID-19 epidemic has brought to light the exposed nerves of Lombardy territorial health: most likely, a more effective network in the territory may have mitigated severe acute respiratory syndrome coronavirus 2 impact. Extra concerns are represented by the difficult access to tampons for citizens, by the lack of tracing, and by the delayed program of influenza vaccination.

Physicians, with their scientific training, are expected to follow a hypothesis-driven, rational, evidence-based approach to clinical decision-making. Likewise, health managers and politicians should be expected to suppress their tendency to base decisions on what is seen as the default, even if it is not the best option.[7]

These considerations stem from the daily experience of the last 9 months working in COVID-19 hub hospitals and from the reports of colleagues: the biggest learning we had is represented by the awareness that we can overcome our mistakes, only if we stop applying partial solutions.

Faced with the pressure of a crisis situation, it is inevitable that policymakers and public health officials will resort to making reactive decisions and taking shortcuts. However, it is possible to alleviate the pressures they face if the choices we make now are driven by long-term thinking and by efforts to reprogram habits, intuitions, and emotions.

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